

**FRONT YARD SET BACK TREE REMOVAL  
REQUEST**

**December 2017**

*Date:* 11/21/17

*Requested by:* Virginia Moede

*Address:* [virginiamoede@mac.com](mailto:virginiamoede@mac.com)

*Location of Tree:* 1177 Las Alturas Rd., Santa Barbara, CA 93103

*Tree Species:* *Leptospermum laevigatum*, *Common Name:* Australian Tea Tree

*Zoning/Setback:* RS 35' Setback

*Reason for Removal:* New house construction, tree will block driveway, and Fire Dept. needs access.

*Proposed Replacement:* Yes ☐ No ☒

*Advisory Committee Recommendation:* Approve Removal: ☒ Deny Removal: ☐

*Staff Recommendation:* Approve Removal: ☒ Deny Removal: ☐

*Date Posted:* 12/5/17

*Comments:* The Committee (5/0) recommends that the Commission approve the removal.

**PHOTO INVENTORY**





City of Santa Barbara  
Parks and Recreation Department  
**SETBACK TREE REMOVAL APPLICATION**

CITY OF SANTA BARBARA

NOV 27 2017

PARK & RECREATION  
PARKS DIVISION

Mailing Address:

PO Box 1990  
Santa Barbara, CA 93102  
(805) 564-5433

Physical Address:

402 E. Ortega St.  
Santa Barbara, CA 93101  
FAX (805) 897-2524

**PAID**

Application Fee: \$50 (effective July 1, 2010)

DATE OF REQUEST:	November 27, 2017
APPLICANT:	Zoe Carlson, Dudek, Owner Agent
OWNER NAME (IF DIFFERENT THAN APPLICANT):	Nona Cometa
MAILING/EMAIL ADDRESS:	726 N La Cumbre Rd, Santa Barbara CA 93101
DAYTIME PHONE:	805-308-8512 <b>ZCARLSON@DUDEK.COM</b>
LOCATION OF TREE (ADDRESS):	Along Pemm Place near the intersection of N La Cumbre
TREE SPECIES (IF KNOWN):	10 trees total as specified in the attached letter
REASON(S) FOR REMOVAL:	City Public Works required public improvements for annexation into the City of Santa Barbara and three-way lot split of 726 N. La Cumbre Road.
TREES WILL BE REPLACED?	<input checked="" type="checkbox"/> YES WITH: Three new street trees (size and species to be determined by Parks and Recreation Commission) <input type="checkbox"/> NO

**PROVIDE THE FOLLOWING SUPPLEMENTAL INFORMATION**

- Property owner letter, indicating reasons for removal. Also include whether:
  - The removal application is associated with new development or redevelopment of property;
  - Status of development application, including whether the project is scheduled for review by the Single Family Design Board, Architectural Board of Review, or Historic Landmarks Commission;
  - The tree is a designated Specimen or Historic Tree or located on a property with a designated Historic Landmark;
- Photo of tree(s) proposed for removal
- Development plan/Landscape plan

## DUDEK

621 CHAPALA STREET  
SANTA BARBARA, CALIFORNIA 93101  
T 805.963.0651 F 805.963.2074

November 27, 2017

City of Santa Barbara  
Parks and Recreation Department  
402 E. Ortega St.  
Santa Barbara, CA 93101

SUBJECT: Property Owner Letter for Setback Tree Removal Application, 726 N. La Cumbre Road. (APN 057-111-003, MST2016-00431).

Dear Parks and Recreation Department:

This letter serves as the Property Owner Letter for the Setback Tree Removal Application for 726 N. La Cumbre Road.

### Reason for Removal:

The property owner is being required by the City Public Works Department to make improvements to Pemmm Place as indicated on the attached Draft Tentative Map. The property owner would like to leave as many trees in place as possible and has initiated a conversation with the Public Works Department to explore alternative designs that will reduce or eliminate the need to remove the trees included in this application.

### Status of Development Application:

The property owner has submitted an Application for Annexation into the City of Santa Barbara and Three-Way Lot Split of 726 N. La Cumbre Road (APN 057-111-003, MST2016-00431). The Development Application Review Team (DART) has completed the 30-day review period and provided comments on Submittal #1. This permit application is being prepared in response the comments on Submittal #1. The project will also be submitted to the Single Family Design Board per the comments in the attached DART Letter dated November 9, 2017. The project is not scheduled for review by the Architectural Board of Review or the Historic Landmarks Commission.

**Tree Species Proposed for Removal:**

None of the trees proposed for removal are designated Specimen or Historic trees. The property the trees are located on is not designated as a Historic Landmark. A summary of the 10 trees proposed for removal is included in Table 1. A full description of the trees including images and maps of tree locations is included in the attached arborist report. Please note that the arborist report includes 11 trees proposed for removal within the setback area, however the City of Santa Barbara Public Works Department has already secured a permit to remove one of the 11 trees as a component of the *Measure A Cycle 3-Sidewalk Infill Project, La Cumbre Rd at Pemm Place*.

**Table 1: Trees Proposed for Removal**

<b>Tree Number (s) from Arborist Report</b>	<b>Botanical Name</b>	<b>Common Name</b>	<b>Number of Trees to be Removed</b>
2, 15, 17, 18	<i>Washingtonia robusta</i>	Mexican fan palm	4
8	<i>Schinus terebinthifolius</i>	Brazilian pepper	1
12	<i>Schinus molle</i>	Peruvian pepper	1
19, 20, 21	<i>Jacaranda mimiosofolia</i>	Jacaranda	3
25	<i>Eucalyptus cinerea</i>	Silver-Dollar Gum	1
<b>Total</b>			<b>10</b>

**Replacement Trees:**

The proposed improvements include three new street trees along the north side of Pemm Place to offset the loss of the trees to be removed. We would appreciate a recommendation at this time of the size and species for the three trees to be planted to replace the 10 trees to be removed.

Should you require any additional information, please do not hesitate to call me at 805-308-8512. Thank you.

Sincerely,



Zoë Carlson

Environmental Specialist/Planner IV

**Attachments:**

1. Tentative Map
2. Dart Comment Letter

726 N. La Cumbre Rd.

Setback Tree Removal Application Property Owner Letter

Page 3 of 3

3. Arborist Report
4. Owner-Agent Authorized Form
5. Check in the amount of \$50

Cc: (Via email without attachments)

Allison Debusk, City of Santa Barbara

Nona Cometa, Property Owner, 726 N La Cumbre Rd, Santa Barbara, CA



July 3, 2017

7020-3

John Paul Sodusta  
726 North La Cumbre Road  
Santa Barbara, California 93101

***Subject: Tree Survey and Arborist Report for the Pemm Place Project, Santa Barbara, California***

Dear Mr. Sodusta:

On May 2, 2017, Dudek arborists, certified by the International Society of Arboriculture (ISA), conducted an inventory and assessment of 28 trees located within and adjacent to the Pemm Place Project (project) site at 726 North La Cumbre Road, Santa Barbara, California. This Arborist Report addresses tree inventory and evaluation techniques, and provides a summary of the site's tree resources and an evaluation of impacts anticipated from proposed development on the project site. This report also outlines tree protection and mitigation measures for direct and potential impacts associated with the proposed site development.

In total, 28 trees were inventoried and evaluated within or immediately adjacent to the proposed project boundary. Based on a review of the preliminary grading and drainage plan (dated June 2017) and the locations of the site's trees, this analysis indicates that up to five trees can be preserved in place, 12 trees can be preserved in place with protective measures, and the remaining 11 trees will require removal. To minimize potential impacts to trees proposed for preservation, site-specific tree protection measures are recommended for implementation prior to, during, and after construction activities.

## **PROJECT LOCATION AND DESCRIPTION**

The project site is located at 726 North La Cumbre Road, Santa Barbara, California. The proposed project site is bordered by North La Cumbre Road to the east, Pemm Place to the south, and residential properties to the north and west. The site is currently composed of a single residential home, associated infrastructure, and Pemm Place Road.

The site encompasses a total area of 32,042 square feet, and 726 North La Cumbre Road is represented on the U.S. Geological Survey 7.5-minute Goleta map, San Bernardino Meridian, in Section 36, Township 5 North, Range 28 West, San Bernardino Meridian; latitude 34°27'0.44"N; longitude 119°45'2.63"W; Pueblo Lands of Santa Barbara.

John Paul Sodusta

Subject: Tree Survey and Arborist Report for the Pemm Place Project, Santa Barbara, California

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## METHODS

Dudek arborists mapped and collected individual tree attribute information for all trees located within and adjacent to the project limits. The location of each individual tree was mapped using a Trimble Pathfinder Pro XH GPS receiver Pathfinder. The Pathfinder has a horizontal accuracy of 1 meter (1 sigma) using differential code positioning techniques. Since tree canopies can sometimes cause loss of satellite lock by blocking the line of sight to satellites, an electronic compass and a reflectorless electronic distance-measuring device was also used in mapping tree locations. The electronic distance-measuring/compass combination operates in concert with the Pathfinder system to position offsets, and offset information is automatically attached to the GPS position data string. All trees on the proposed project site were tagged in the field with an aluminum tree tag bearing a unique identification number. A tag was placed on the trunk of each inventoried tree, and each tag number corresponds with individual tree data. Trees mapped on adjacent private property were not tagged.

Concurrent with tree mapping efforts, Dudek arborists collected tree attribute data, including species, quantity of individual trunks, individual trunk diameters, overall height, canopy extent, general health and structural conditions, and overall condition. Trunk diameter measurements were collected at 4.5 feet above natural grade along the trunk axis, with a few common exceptions. When a tree's trunk was located on a slope, the 4.5-foot height was approximated as the average of the shortest and longest sides of the trunk (i.e., the uphill side and downhill side of the tree's trunk, respectively), and the measurement was made at the circumference of the trunk at this point. Tree height measurements were ocular estimates made by experienced field arborists. Tree canopy diameters were typically estimated by pacing off the measurement based on the arborist's knowledge of his stride length or by visually estimating the canopy width. The tree-crown diameter measurements were made along an imaginary line intersecting the tree trunk that best approximated the average canopy diameter. Due to site restrictions, the attributes of the trees located on private property (not owned by the client) are based on ocular estimations taken from Pemm Place Road.

Pursuant to the Guide for Plant Appraisal,<sup>1</sup> tree health and structure were evaluated on the following five tree components: roots, trunks, scaffold branches, small branches, and foliage. Each component of the tree was assessed with regard to health factors such as insect, fungal, or pathogen damage; fire damage; mechanical damage; presence of decay; presence of wilted or dead leaves; and wound closure. Components were graded as good, fair, poor, or dead, with good representing no apparent problems, and dead representing a dying and/or dead tree. This method

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<sup>1</sup> Council of Tree and Landscape Appraisers. 2000. *Guide for Plant Appraisal*, 9th Edition. April 30, 2000.

John Paul Sodusta

Subject: Tree Survey and Arborist Report for the Pemm Place Project, Santa Barbara, California

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of tree condition rating is comprehensive, and results in ratings that are useful for determining the status of trees based on common standards. Trees in natural settings have important habitat value, as evidenced by numerous cavity nesters and insects that thrive on and within trees, even when they are considered in poor structural or health condition. However, this assessment focused on tree conditions concerning health and structure for the purposes of analyzing potential project impacts, and, where necessary, provided recommendations for mitigating potential tree hazards, such as trees with weak limb attachments, cavities and rot, or excessive lean that would not be appropriate for inclusion in a developed landscape. Each tree was assigned an overall condition rating based on component grades. The overall ratings were graded on a percentage scale that ranged from 10% (dead) to 100% (excellent condition).

Upon completion of field data collection and mapping, raw GPS data were post-processed using GPS Pathfinder Office (Version 5.40), and individual tree location data were compiled and updated in geographic information system (GIS) software. The digital tree locations were linked to individual tree identification numbers and associated tree attribute data. This data set was then evaluated using ArcGIS (Version 10.1) software to determine the position of individual trees related to the project development areas. Data resulting from this analysis were used to evaluate the individual tree impact totals in this report.

## PROJECT LIMITATIONS

This report presents site tree information as observed in the field on May 2, 2017. No root crown excavations or investigations, internal probing, or aerial canopy inspections were performed during the tree assessments. Therefore, the presence or absence of internal wood rot or other hidden or inaccessible inferiorities in individual trees could not be confirmed. It is recommended that any large tree proposed for preservation in an urban setting be thoroughly inspected for internal or subterranean decay by a qualified arborist before finalizing preservation plans.

## OBSERVATIONS

A total of 28 trees are located within the project survey area, representing 15 species. One tree, a coast live oak (*Quercus agrifolia*) located in front of 3894 Pemm Place, is native to California. The trees are scattered throughout the survey area, and with the exception of three trees, all are located on adjacent land parcels.

Overall, the trees exhibit growth and structural conditions that are typical of their locations as ornamental and landscape trees. The trees exhibit various trunk and branch maladies and varying health and structural conditions. As presented in the Tree Information Matrix (Attachment 1),

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*Subject: Tree Survey and Arborist Report for the Pemm Place Project, Santa Barbara, California*

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89% (25 trees) are in good health condition, and 11% (3 trees) are in fair health. Structurally, 14% (4 trees) of the individually mapped trees are considered to exhibit good structure, and 86% (24 trees) exhibit fair structure.

Trees within the tree survey area vary in size and stature according to species and available growing space. The site's protected trees are primarily single-stemmed and have diameters ranging from 4 to 18 inches. The remaining trees are multi-stemmed and have individual diameters ranging from 4 to 21 inches. Tree heights vary from 15 to 60 feet. Tree canopy extents range from 10 feet to nearly 45 feet.

## **PROJECT-RELATED IMPACTS**

Tree impacts were determined using GIS technology and spatial locations of trees relative to proposed project impact areas (limits of grading). Impacts were further determined based on the Dudek arborist's experience with native and non-native trees and their typical reactions to root disturbances from construction activities, such as soil compaction, excavation, and remedial grading. The impact analysis results (Attachment 2) were used for developing mitigation measures for the proposed project.

Impacts to trees can be classified as direct or indirect. Direct impacts to trees related to site development are typically the result of physical injuries or changes caused by machinery involved with the development process. Direct impacts include tree removal, root damage, soil excavation and compaction, grade changes, loss of canopy, and trunk wounds, among others. Indirect impacts to trees are the result of changes to the site that may cause tree decline, even when the tree is not directly injured. Indirect impacts include alterations to stream flow rates, diversion of groundwater flow, introduction of exotic plant species, and alterations to disturbance regimes. Wider-scale alterations to the area near trees, as well as specific changes that occur around the trees, are important considerations.

There is variation in tolerance to construction impacts among tree species, ages, and conditions. It is important to know how a certain tree—based on its species, age, and condition—would respond to different types of disturbance. The trees in the survey area are of varying ages and conditions. Mature specimens are typically more sensitive to root disturbance and grade changes. In general, healthy trees will respond better to changes in their growing environment. Trees of poor health or stressed conditions may not be vigorous enough to cope with direct or indirect impacts from construction activities.

Impact totals presented below are based on conceptual disturbance limits and development plans as of the date of this Arborist Report. As such, the actual number of trees subject to direct and

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indirect impacts may change as the detailed site planning process proceeds. Actual tree impact numbers may be lower than anticipated and as presented in this Arborist Report once detailed grading plans are developed. Measures to reduce impacts are encouraged and would be implemented in the field during grading operations. Following completion of construction-related disturbances, actual protected tree impact totals would be updated and provided, along with revised mitigation totals.

## **DIRECT IMPACTS**

For the purposes of this Arborist Report, direct impacts are those associated with tree removal or encroachment within the tree protection zone (canopy dripline plus 5 feet, or 15 feet from trunk, whichever is greater). Tree removal is expected to be required when the trunk is located inside or within 2 feet of the proposed limits of grading. Encroachment is expected when soil and roots are disturbed within the tree protection zone.

Based on site observations, analysis of tree locations in relation to the Preliminary Grading and Drainage Plan (February 2017), and Dudek's experience working with trees on construction sites, Dudek arborists concluded that up to five trees can be preserved in place, 12 trees can be preserved in place with protective measures, and the remaining 11 trees will require removal. Table 1 provides a summary of trees in the project survey area by tree preservation status.

**Table 1**  
**Summary of Tree Impact Status**

<b>Tree Preservation Status</b>	<b>Number of Trees</b>
Preservation	5
Preservation (Encroachment) – Protection Measures	12
Removal	11
<b>Total</b>	<b>28</b>

Attachment 1 provides tree attribute details and preservation status for all trees located in the project survey area. Attachment 3, Tree Locations, shows the locations of the trees and impact status within the project survey area.

## **INDIRECT IMPACTS**

Indirect impacts to trees are the result of changes to a site that may cause tree decline, even when the tree is not directly injured. Changes affecting trees include diverting runoff and stormwater, creating retention and detention ponds, relocating or improving streams, lowering or raising water tables,

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altering the capacity for soil moisture recharge, removing vegetation, or damming underground water flow.<sup>2</sup> For the purposes of this Arborist Report, indirect tree impacts are expected for trees within 25 feet of the proposed project's limits of grading; these trees would not be subject to removal or encroachment. Three trees will be indirectly impacted by the proposed project.

## CITY REGULATIONS

Conditions of approval related to protected tree preservation and mitigation for this project are provided in City of Santa Barbara Municipal Code 15.24. The code establishes protections for privately owned trees. Protected trees include designated "specimen" and "historic" trees, trees located in the front zoning setback of a parcel (middle of tree trunk is within 6 feet of the curb), trees located in commercial parking lots, and trees identified on an approved plan. The City of Santa Barbara (City) does not have a species-specific native oak tree or other native tree preservation ordinance pertaining to trees on private property. However, during environmental review for discretionary projects, impacts to oak trees (removal, significant alteration, grading, or trenching within the critical root zone) must be analyzed and may result in oak tree protection or replacement.

Based on the City Municipal Code, 12 trees are considered "set-back" trees, none of which are native to California. Of the 11 trees requiring removal, all are considered "set-back" trees. However, due to property encroachment, the total number of "set-back" trees may increase or decrease depending on the location of the property lines. As such, a tree removal permit is required prior to the removal or significant pruning of any trees on or adjacent to the proposed project site.

The City's Municipal Code does not identify mitigation requirements for the removal of private and/or "set-back" trees on private property. However, the City's street tree committee may require mitigation for the removal of the 11 "set-back" trees.

## RECOMMENDATIONS

The following recommendations are provided to enhance the survivability of those trees designated for retention on the project site:

1. All trees that will not be removed shall be preserved and protected in place. Trees within approximately 15 feet of proposed construction activity shall be temporarily fenced with

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<sup>2</sup> Matheny, N., and J.R. Clark. 1998. *Trees and Development: A Technical Guide to Preservation of Trees During Land Development*. Champagne, Illinois: International Society of Arboriculture. June 1, 1998.

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chain-link or other material satisfactory to City planning staff throughout grading and construction activities. The fencing shall be installed 3 feet outside of the dripline of each tree, be 4 feet tall, and staked every 6 feet. The fenced area shall be considered the tree protection zone (TPZ).

2. A qualified arborist shall be present during any grading or excavating adjacent to or beneath the dripline of any protected tree. Any roots encountered shall be cleanly cut and sealed with a tree-seal compound. Any thinning or root pruning and trimming shall be done under the direction of a qualified arborist.
3. Heavy equipment shall not be used or parked within 3 feet of protected tree driplines, except where approved by a qualified arborist and after protective fencing has been installed. Soil, rocks, or construction material shall not be stored or placed within the dripline of any specimen or protected tree.
4. Trees slated for preservation that are inadvertently damaged (25% or more of root area) or lost due to construction processes shall be replaced in accordance with any City-designated mitigation requirements prior to issuance of occupancy permits. The applicant shall submit an annual report for 3 years summarizing the establishment and success of any required replacement trees.
5. During excavation of utility trenches, roots encountered that are 1 inch in diameter and larger shall be cleanly cut at right angles to avoid root tearing. Trenching or construction completed within the TPZ, as defined in Attachment 4, Tree Protection Measures, shall be accomplished by hand tools or other methods that avoid damage to tree roots, such as directional drilling, air-spade excavation, or others.
6. The project arborist shall monitor all activities within the TPZ, including demolition, excavation, and driveway installation. This will require the project agent and/or contractor to notify the project arborist well in advance of scheduled work adjacent to protected trees. A pre-construction conference with the arborist and contractor shall occur prior to commencement of demolition. Documentation of inspections shall be submitted to the City Planner within 5 days of inspection or immediately if violations occur.
7. All trees that are impacted during construction within the TPZ shall be monitored by an ISA-Certified Arborist for the first 5 years after construction completion. The arborist shall submit an annual report, photograph each tree, and compare tree health and condition to the original, pre-construction baseline.

Attachment 4 provides further detailed tree protection measures for the 17 protected and preserved trees on site.

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Subject: Tree Survey and Arborist Report for the Pemm Place Project, Santa Barbara, California

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## CONCLUSION

Dudek arborists inventoried and evaluated 28 trees on and adjacent to the proposed project site. For the purposes of this Arborist Report, 11 trees were identified as proposed for removal, 14 trees were identified as proposed for preservation in place with tree protection measures, and three trees are proposed for preservation with no tree protection measures. Based on the City Municipal Code, the project applicant is required to submit a tree removal permit prior to the removal of any trees. The City Municipal Code does not identify mitigation requirements for the removal of private and/or "set-back" trees on private property. However, the City's street tree committee may require mitigation for the removal of the 11 "set-back" trees.

This report provides conclusions and recommendations based on an examination of the trees and surrounding site by an ISA-Certified Arborist. Arborists are tree specialists who use their education, knowledge, training, and experience to examine trees, recommend measures to enhance the beauty and health of trees, and attempt to reduce the risk of living near trees.

Arborists cannot detect every condition that could possibly lead to the failure of a tree. Trees are living organisms that fail in ways not fully understood. Conditions are often hidden within trees and below ground. Arborists cannot guarantee that a tree will be healthy or safe under all circumstances, or for a specified period of time. There are no guarantees that a tree's condition will not change over a short or long period due to weather or cultural or environmental conditions. Trees can be managed but not controlled. To live near trees is to accept some degree of risk.

If you have any questions or comments regarding the content of this letter, please do not hesitate to contact me at 949.450.2525 ext. 3310 or ckallstrand@dudek.com.

Sincerely,



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Christopher Kallstrand  
Arborist/Urban Forester

Att.: Attachment 1 – Tree Information Matrix  
Attachment 2 – Tree Impact Exhibit  
Attachment 3 – Tree Locations  
Attachment 4 – Tree Protection Measures

**ATTACHMENT 1**  
*Tree Information Matrix*

Attachment 1 - Tree Information Matrix													
Tree No.	Botanical Name	Common Name	Stems	Individual Stem Diameter (in.)				Height (ft.)	Canopy (ft.)	Health	Structure	Notes	Impact
				D1	D2	D3	D4						
1	<i>Adonis pseudocarya</i>	Black locust	1	18				50	30	Good	Fair	Off-site - Behind fence	Encroachment - Construction Monitoring
2	<i>Washingtonia robusta</i>	Mexican fan palm	1	18				25	10	Good	Fair	Off-site - Across the street	Remove
3	<i>Melaleuca quinquenervia</i>	Paper bark melaleuca	1	8	8	8		60	25	Good	Fair	Off-site - Behind fence	Encroachment - Construction Monitoring
4	<i>Washingtonia robusta</i>	Mexican fan palm	1	18				40	15	Good	Good	Off-site - Behind fence	Encroachment - Construction Monitoring
5	<i>Schinus molle</i>	Peruvian pepper	1	20				30	30	Good	Fair	On-site	Encroachment - Construction Monitoring
6	<i>Ulmus parvifolia</i>	Chinese elm	2	8	5			30	20	Good	Fair	On-site	Preserve
7	<i>Ulmus parvifolia</i>	Chinese elm	1	17				50	25	Good	Fair	On-site	Preserve
8	<i>Schinus terebinthifolius</i>	Brazilian pepper	4	17	9	5	11	40	30	Good	Fair	Off-site - Across the street	Remove
9	<i>Cedrus atlantica</i>	Atlas Cedar	1	23				50	30	Good	Fair	Off-site - Across the street	Preserve
10	<i>Pinus pinea</i>	Stone pine	1	32				45	30	Good	Fair	Off-site - Across the street	Preserve
11	<i>Arcaea heterophylla</i>	Norfolk Island Pine	1	16				55	10	Good	Fair	Off-site - Across the street near T-Intersect	Encroachment - Construction Monitoring
12	<i>Schinus molle</i>	Peruvian pepper	1	17				30	25	Fair	Fair	Off-site - Across the street	Preserve
13	<i>Pinus pinea</i>	Stone pine	1	36				50	35	Good	Fair	Off-site - Across the street	Remove
14	<i>Schinus molle</i>	Peruvian pepper	2	10	7			30	20	Good	Fair	Off-site - Across the street	Encroachment - Construction Monitoring
15	<i>Washingtonia robusta</i>	Mexican fan palm	1	13				25	15	Good	Good	Off-site - Across the street	Encroachment - Construction Monitoring
16	<i>Arcaea heterophylla</i>	Norfolk Island Pine	1	12				40	15	Good	Fair	Off-site - Across the street	Remove
17	<i>Washingtonia robusta</i>	Mexican fan palm	1	14				30	10	Good	Fair	Off-site - Across the street	Remove
18	<i>Washingtonia robusta</i>	Mexican fan palm	1	14				15	10	Good	Good	Off-site - Across the street	Remove
19	<i>Jacaranda mimosaefolia</i>	Jacaranda	2	6	6			20	10	Good	Fair	Off-site - Across the street	Remove
20	<i>Jacaranda mimosaefolia</i>	Jacaranda	2	4	4			20	10	Good	Fair	Off-site - Across the street	Remove
21	<i>Jacaranda mimosaefolia</i>	Jacaranda	1	4				15	10	Good	Fair	Off-site - Across the street	Remove
22	<i>Magnolia grandifolia</i>	Southern magnolia	1	10				35	15	Good	Fair	Off-site - Behind fence	Encroachment - Construction Monitoring
23	<i>Washingtonia robusta</i>	Mexican fan palm	1	17				30	15	Good	Fair	Off-site - Across the street	Remove
24	<i>Syagrus romanzoffiana</i>	Queen palm	1	10				18	12	Fair	Fair	Off-site - Across the street	Encroachment - Construction Monitoring
25	<i>Eucalyptus cinerea</i>	Silver Dollar Gum	1	17				35	25	Good	Fair	Off-site - Across the street	Remove
26	<i>Syagrus romanzoffiana</i>	Queen palm	1	10				18	12	Fair	Fair	Off-site - Across the street	Preserve
27	<i>Jacaranda mimosaefolia</i>	Jacaranda	4	11	12	10	12	40	45	Good	Good	Off-site - Across the street	Encroachment - Construction Monitoring
28	<i>Quercus agrifolia</i>	Coast live oak	2	18	21			45	35	Good	Fair	Off-site - Across the street	Encroachment - Construction Monitoring

# **ATTACHMENT 2**

## *Tree Impact Exhibit*



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# **ATTACHMENT 3**

*Tree Locations*



0 15 30 Feet

DUDEK

Attachment 3 - Tree Locations

# **ATTACHMENT 4**

## *Tree Protection Measures*

## Attachment 4 – Tree Protection Measures

*The following sections are included as general guidelines for tree protection from construction impacts. The measures presented should be monitored by arborists and enforced by contractors and developers for maximum benefit to the trees.*

### Tree Protection Measures Prior to Construction

**Fencing:** All remaining trees that will not be relocated or removed shall be preserved and protected in place. Trees within approximately 15 feet of proposed construction activity shall be temporarily fenced with chain link or other material satisfactory to City planning staff throughout grading and construction activities. The fencing shall be installed 3 feet outside of the dripline of each tree (or edge of canopy for cluster of trees), be 4 foot tall, and staked every 6 feet. The fenced area shall be considered the tree protection zone (TPZ) unless proximate construction required temporary removal.

**Pre-Construction Meeting:** A pre-construction meeting shall be held between all contractors (including grading, tree removal/pruning, builders, etc.) and the arborist. The arborist will instruct the contractors on tree protection practices and answer any questions. All equipment operators and spotters, assistants, or those directing operators from the ground, shall provide written acknowledgement of their receiving tree protection training. This training shall include information on the location and marking of protected trees, the necessity of preventing damage, and the discussion of work practices that will accomplish such.

### Protection and Maintenance During Construction

Once construction activities have begun the following measures shall be adhered to:

**Equipment Operation and Storage:** Avoid heavy equipment operation around the trees. Operating heavy machinery around the root zones of trees will increase soil compaction, which decreases soil aeration and subsequently reduces water penetration in the soil. All heavy equipment and vehicles should, at minimum, stay out of the fenced tree protection zone, unless where specifically approved in writing and under the supervision of a Certified Arborist or as provided by the approved landscape plan.

**Storage and Disposal:** Do not store or discard any supply or material, including paint, lumber, concrete overflow, etc. within the protection zone. Remove all foreign debris within the protection zone; it is important to leave the duff, mulch, chips, and leaves around the retained trees for water retention and nutrients. Avoid draining or leakage of equipment fluids near retained trees. Fluids such as: gasoline, diesel, oils, hydraulics, brake and transmission fluids, paint, paint thinners, and glycol (anti-freeze) should be disposed of properly. Keep equipment parked at least 50 feet away from retained trees to avoid the possibility of leakage of equipment fluids into the soil. The effect of toxic equipment fluids on the retained trees could lead to decline and death.

**Grade Changes:** Grade changes, including adding fill, are not permitted within the tree protection zone, without special written authorization and under supervision by a Certified Arborist or as provided by the approved landscape plan. Lowering the grade within this area will necessitate cutting main support and feeder roots, jeopardizing the health and structural integrity of the tree(s). Adding soil, even temporarily, on top of the existing grade will compact the soil further, and decrease both water and air availability to the trees' roots.

Moving Construction Materials: Care will be taken when moving equipment or supplies near the trees, especially overhead. Avoid damaging the tree(s) when transporting or moving construction materials and working around the tree (even outside of the fenced tree protection zone). Above ground tree parts that could be damaged (e.g., low limbs, trunks) should be flagged with red ribbon. If contact with the tree crown is unavoidable, prune the conflicting branch(es) using ISA standards.

Root Pruning: Except where specifically approved in writing or as provided in Attachment 3, all trenching shall be outside of the fenced protection zone. Roots primarily extend in a horizontal direction forming a support base to the tree similar to the base of a wineglass. Where trenching is necessary in areas that contain tree roots, prune the roots using a Dosko root pruner or equivalent. All cuts should be clean and sharp, to minimize ripping, tearing, and fracturing of the root system. The trench should be made no deeper than necessary.

Irrigation: Trees that have been substantially root pruned (30% or more of their root zone) will require irrigation for the first twelve months. The first irrigation should be within 48 hours of root pruning. They should be deep watered every two to four weeks during the summer and once a month during the winter (adjust accordingly with rainfall). One irrigation cycle should thoroughly soak the root zones of the trees to a depth of 3 feet. The soil should dry out between watering; avoid keeping a consistently wet soil. Designate one person to be responsible for irrigating (deep watering) the trees. Check soil moisture with a soil probe before irrigating. Irrigation is best accomplished by installing a temporary above ground micro-spray system that will distribute water slowly (to avoid runoff) and evenly throughout the fenced protection zone *but never soaking the area located within 6-feet of the tree trunk, especially during warmer months.*

Pruning: Do not prune any of the trees until all construction is completed. This will help protect the tree canopies from damage. All pruning shall be completed under the direction of an ISA Certified Arborist and using ISA guidelines. Only dead wood shall be removed from tree canopies.

Washing: During construction in summer and autumn months, wash foliage of trees adjacent to the construction sites with a strong water stream every two weeks in early hours before 10:00 a.m. to control mite and insect populations.

Inspection: An ISA Certified Arborist shall inspect the impacted preserved trees on a monthly basis during construction. A report comparing tree health and condition to the original, pre-construction baseline shall be submitted following each inspection. Photographs of representative trees are to be included in the report on a minimum annual basis.

## **Maintenance After Construction**

Once construction is complete the fencing may be removed and the following measures performed to sustain and enhance the vigor of the preserved trees.

Mulch: Provide a 4-inch mulch layer under the canopy of trees. Mulch should include clean, organic mulch that will provide long-term soil conditioning, soil moisture retention, and soil temperature control.

Pruning: The trees will not require regular pruning. Pruning should *only* be done to maintain clearance and remove broken, dead or diseased branches. Pruning shall only take place following a recommendation by an ISA Certified Arborist and performed under the supervision of an ISA Certified Arborist. No more than 20% of the canopy shall be removed at any one time. All pruning shall conform to International Society of Arboriculture standards.

Watering: The natural trees that are not disturbed should not require regular irrigation, other than the twelve months following substantial root pruning. However, soil probing will be necessary to accurately monitor moisture levels. Especially in years with low winter rainfall, supplemental irrigation for the trees that sustained root pruning and any newly planted trees may be necessary. The trees should be irrigated *only* during the winter and spring months.

Watering Adjacent Plant Material: All plants near the trees shall be compatible with water requirements of said trees. The surrounding plants should be watered infrequently with deep soaks and allowed to dry out in-between, rather than frequent light irrigation. The soil shall not be allowed to become saturated or stay continually wet. Irrigation spray shall not hit the trunk of any tree. A 60-inch dry-zone shall be maintained around all tree trunks. An above ground micro-spray irrigation system is recommended over typical underground pop-up sprays.

Washing: Periodic washing of the foliage is recommended during construction but no more than once every two weeks. Washing should include the upper and lower leaf surfaces and the tree bark. This should continue beyond the construction period at a less frequent rate with a high-powered hose only in the early morning hours. Washing will help control dirt/dust buildup that can lead to mite and insect infestations.

Spraying: If the trees are maintained in a healthy state, regular spraying for insect or disease control should not be necessary. If a problem does develop, an ISA Certified Arborist should be consulted; the trees may require application of insecticides to prevent the intrusion of bark-boring beetles and other invading pests. All chemical spraying should be performed by a licensed applicator under the direction of a licensed pest control advisor.

Inspection: All trees that were impacted during construction within the tree protection zone should be monitored by an ISA Certified Arborist for the first five years after construction completion. The Arborist shall submit an annual report, photograph each tree and compare tree health and condition to the original, pre-construction baseline.